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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/776,413	02/11/2004	Fanny I. Mlinarsky .	22754/1-CON	2409

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EXAMINER	
NGUYEN, BRIAN D	

ART UNIT	PAPER NUMBER
2661	

DATE MAILED: 12/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/776,413	MLINARSKY ET AL.	
	Examiner	Art Unit	
	Brian D Nguyen	2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 October 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-52* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-52* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *7/6/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The applicant is requested to update the status of application No. 10/379,281 (now US Patent No. 6,724,730).

Claim Objections

2. Claims 8, 16, 18, and 48-52 are objected to because of the following informalities: Appropriate correction is required.

Claims 8 and 9, line 1, it is suggested to insert --test-- before "system".

Claim 16, "**communication** nodes" seems to refer back to "**connection** nodes" in line 2 of claim 12. If this is true, it is suggested to change "communication" to --connection--.

Claim 18, "programmable" in lines 3 and 4 seems to mean "adjustable" as mentioned in line 5 of claim 17. If this is true, it is suggested to change "programmable" to --adjustable--.

Claim 48, line 8, "said RF combiner" seems to refer back to "an RF combination component" in line4. If this is true, it is suggested to change "said RF combiner" to --said RF combining component--.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 9, 18, 26, 43, and 45 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9 recites the limitation "said emulated RF environment" in line 3 and "said information for emulated spatial position" in line 4. There is insufficient antecedent basis for this limitation in the claim. Claim 9 seems to be depending on claim 4. If this true, it is suggested to change "The system of Claim 3" to --The test system of Claim 4-- and insert --an-- before "emulated" in line 4.

Claim 18, it is unclear if "a connected RF device under test" in lines 1 and 3 is referring to "a connected RF device under test" in line 5 of claim 17 or referring to another connected RF device under test. If "**a** connected RF device under test" in lines 1 and 3 is referring to "a connected RF device under test" in line 5 of claim 17, then "a" should be changed to --the--. Otherwise, insert --second-- before "connected RF" and replace the second "a" with --the--.

Claim 26 recites the limitation "said plurality of RF signal access locations" in line 1. There is insufficient antecedent basis for this limitation in the claim. Claim 26 should depend on claim 25 for proper dependency.

Claim 43 recites the limitation "said communication protocol" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 45 recites the limitation "said wireless network" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-6, 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Frostrom et al (5,465,393).

Regarding claim 1, Frostrom discloses a test system for testing wireless devices (see figures 1 and 3), comprising: an RF combining component (see combiner); an adjustable attenuation component (see for example 24 in figure 1 and 80 in figure 3), in RF connection with the RF combining component; a test node (MS1 and MS2 in figures 1 and 3), in RF connection with the adjustable attenuation component, so that RF signals between the RF combining component and the test node pass through the adjustable attenuation component, and wherein the test node includes a device under test (MS1 and MS2 are under test); a controller component (PC 200) controlling the adjustable attenuation component, wherein the controller component causes the adjustable attenuation component to vary RF signal strength between the RF combining component and the test node (see col. 4, lines 33-45).

Regarding claim 2, Frostrom discloses the RF combining component combines RF signals from a plurality of test nodes (see, for example, combiner 28).

Regarding claim 3, Frostrom discloses RF combining component includes disconnectable connection ports to allow additional test nodes to be connected to the RF combining component (see combiner 28 with two used ports and combiner 90 with four used ports).

Regarding claim 4, Frostrom discloses controller component maintains information for an emulated spatial position of the test node in an emulated wireless environment, and by causing the adjustable attenuation component to vary RF signal strength between the RF combining component and the test node, the controller component modifies the emulated spatial position of the test node in the emulated wireless environment (see col. 4, lines 33-45).

Regarding claim 5, Frostrom discloses the RF combing component combines RF signals from a plurality of test nodes, and the controller component maintains information for an emulated spatial position in the emulated wireless environment for each of the plurality of test nodes, the controller component, by causing the adjustable attenuation component to vary RF signal strength, changes the emulated spatial position of the test node including the device under test in the emulated wireless environment (see col. 4, lines 33-45).

Regarding claim 6, Frostrom discloses controller component emulates objects causing RF signal distortion in the emulated wireless environment through adjustment of the adjustable attenuation component (see changing the amount of attenuation in col. 4, line 33-45).

Regarding claim 9, Frostrom discloses the system further including: a graphical display component, in communication with the controller component, the graphical display component to show the emulated RF environment with test nodes depicted in spatial relation to each other as defined by the information for emulated spatial position for each test node (see display 220 in figure 3A and col. 4, lines 38-45).

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –

> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 17-19, 22-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Oh et al (6,438,357).

Regarding claim 17, Oh discloses a RF module for testing an RF device under test in a test environment; the RF module comprising: at least one isolation chamber, the isolation chamber (21) including a connection port to connect to the RF device (62, 64, 66) under test, the connection port including connections so that a connected RF device under test is in RF connection with an adjustable attenuation component (22 and 46, for example), and wherein the adjustable attenuation component is in RF connection with an RF port on the RF module; a controller, to control the connected RF device under test (see col. 2, lines 9-12).

Regarding claim 18, Oh discloses wherein a connected RF device under test includes a second RF connection; and the connection port includes connections so that the second RF connection on a connected RF device under test is in RF connection to a second programmable attenuation component, the second programmable attenuation component in RF connection with the RF port through an RF combining component (see programmable attenuators 22, 46, 26, 48, ... and combining component 52 and 54 in figure 1).

Regarding claim 19, Oh discloses wherein the RF port on the RF module allows interconnection to an RF combining component, the RF combining component to combine RF signals from other RF devices (see combining component 52 and 54 in figure 1).

Regarding claim 22, Oh discloses the RF isolation chamber contains RF signals emanating from the connected RF device under test (see figure 1).

Regarding claim 23, Oh discloses the RF isolation chamber isolates the connected RF device under test from outside RF signals and noise (laboratory isolates the connected RF device under test from outside RF signals and noise).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 8, 10-13, 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frostrom et al (5,465,393).

Regarding claim 8, Frostrom does not specifically disclose the RF connection is provided by shielded cables. However, to use a shielded cable to protect the signal from interference is well known in the art. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use a shielded cable as it is well known in order to reduce interference to the signal.

Regarding claim 10, claim 10 is a method claim that has substantially the same limitation as the combined apparatus claims 1 and 8. Therefor, it is subject to the same rejection.

Regarding claims 11-13 and 15-16, claims 11-13 and 15-16 are method claims that have substantially the same limitations as the respective apparatus claims 4-6 and 8-9. Therefore, they are subject to the same rejection.

11. Claims 7 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frostrom et al (5,465,393) in view of Labedz et al (6,308,072).

Regarding claims 7 and 14, Frostrom does not specifically disclose an RF interference signal is introduced into the test system. However, simulate the effect of interference is well known in the art. Labedz discloses simulate the effect of interference (see abstract). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to introduce an RF interference signal into the test system as taught by Labedz in the system of Frostrom in order to estimate the effect of the interference to the system.

12. Claims 20-21, 24-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oh et al (6,438,357).

Regarding claims 20 and 21, Oh does not specifically disclose a DC signal detector and a DC signal injector. However, every port should has a DC signal detector and a DC signal injector because without a signal detector and injector, the port cannot detect incoming signal or inject signal for transmitting to other devices. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include a DC signal detector and injector as it is well known in order to communicate with other devices.

Regarding claim 24, Oh does not specifically disclose the connection port includes RF isolation shielding to contain RF signals emanating from a connected RF under test. However, to use RF isolation shielding to protect the signal from interference is well known in the art. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use a shielded cable as it is well known in order to reduce interference to the signal.

Regarding claims 25-26, Oh does not specifically disclose the module including a plurality of RF signal access location to provide access to RF signals at each of the plurality of RF signal access locations. However, to provide access to RF signals at each of the plurality of RF signal access locations is a matter of design choice because installing an input/output can provide access to RF signals.

Regarding claim 27, Oh does not specifically disclose receiving a system synchronization signal. However, receiving a synchronization signal to synchronize one device with another device is well known in the art. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to synchronize the system so that all devices in the system can be in synchronization with each others.

Regarding claim 28, Oh does not specifically disclose the RF module is detachably mountable within an RF isolation chassis, wherein the RF port on the RF module connected to an RF combining component within the RF isolation chassis, the RF combining component combining RF signals from the RF module and at least one other RF device. However, to mount the RF module in a chassis is well known and to configure the system as described in claim 28 is a matter of choice. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to configure the system as described in claim 28 to, for example save space and/or to easily expand the system when needed.

13. Claims 29-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oh et al (6,438,357) in view of Labedz et al (6,308,072).

Regarding claims 29, 34-36, Oh discloses a test module, for use in a RF test environment comprising: an RF port to connect to the RF test environment (see figure 1), an adjustable

attenuation component in RF connection with the RF port (46 for example); a virtual client emulator, to emulate at least one virtual client that is transmitting RF signals in the RF test environment (see virtual clients 62, 64, 66). Oh does not specifically disclose modulator/demodulator. However, using modulator/demodulator is well known in the art. Labedz discloses the use of modulator/demodulator (see 217 and 223 of figure 2). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the modulator/demodulator as taught by Labedz in the system of Oh in order to modulate and demodulate the signal.

Regarding claims 30-33, Oh in view of Labedz does not specifically disclose create data frame that are invalid in accordance with a selected protocol/with incorrect checksum/transmits a data frame at a time when another device is transmitting data. However, to perform a specific test in a lab such as interference or collision detection, the system must transmit a data frame at a time when another device is transmitting data. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to create data frames such as the ones described in claims 30-33 in order to perform those kind of tests in the laboratory.

Regarding claims 37-38, Oh in view of Labedz does not specifically disclose the RF module is detachably mountable within an RF isolation chassis, wherein the RF port on the RF module connected to an RF combining component within the RF isolation chassis, the RF combining component combining RF signals from the RF module and at least one other RF device. However, to mount the RF module in a chassis is well known and to configure the system as described in claims 37 and 38 is a matter of choice. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to configure

the system as described in claims 37 and 38 to, for example save space and/or to easily expand the system when needed.

Regarding claims 39-46, claims 39-46 are method claims that have substantially the same limitations as the respective apparatus claims 29-36. Therefore, they are subject to the same rejection.

14. Claim 47 is rejected under 35 U.S.C. 103(a) as being unpatentable over Frostrom et al (5,465,393) in view of Oh et al (6,438,357).

Regarding claim 47, Frostrom does not specifically disclose roaming feature. However, Oh discloses this feature (see handoff test in col. 1, lines 48-52). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to perform roaming test as taught by Oh in the system of Frostrom in order to test the roaming in the laboratory.

15. Claims 48-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oh et al (6,438,357).

Regarding claims 48-51, Oh discloses a method for testing a roaming (handoff) feature of a wireless device (62, 64, 66) comprising isolating the wireless device in an RF isolation chamber (see the test is performed in a lab in col. 1, lines 48-52); providing a first and a second access points (10, 12, 14), wherein each access point is in RF connection with the wireless device by a RF path to an RF combining component (52, 54) (see figure 1); establishing RF communications between the wireless device and the first access point; attenuating an RF signal on the RF path between the combiner and the first access point; monitoring the wireless as the wireless device establishes RF communication with the second access point over the RF path to

the second access point (see col. 1, line 48-col. 2, line 12; col. 3, lines 61-67; and col. 4, lines 41-49. Note that a handoff is performed when a mobile moves from one cell to another, the mobile will establish a communication with the second cell before the handoff). Oh does not specifically disclose the path is a shielded RF path. However, to use a shielded cable to protect the signal from interference is well known in the art. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use a shielded cable as it is well known in order to reduce interference to the signal.

Regarding claim 52, Oh does not disclose measuring the time required for the wireless device to establish RF communication with the second access point. However, to measure the time required for the wireless device to establish RF communication with the second access point is a matter of choice because a timer can be used to measure the time. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to measure the time required for the wireless device to establish RF communication with the second access point so that this information can be used for system evaluation.

Double Patenting

16. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

17. Claims 1-46 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-46 of U.S. Patent No. 6,724,730. Although the conflicting claims are not identical, they are not patentably distinct from each other because the limitations of the claimed invention are described in claims 1-46 of Patent No. 6,724,730 with different wording and/or arrangement. In addition, broadening the scope of independent claims is obvious. It has been held that the omission of an element and its function is an obvious expedient if the remaining elements perform the same function as before. An apparatus claim is also obvious of a method claim and vise versa if they each contain substantially the same elements.

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kim et al (6,128,474) and Funk et al (6,766,164).

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian D Nguyen whose telephone number is (571) 272-3084. The examiner can normally be reached on 7:30-6:00 Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye can be reached on (571) 272-3078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

12/06/2004

BRIAN NGUYEN
PRIMARY EXAMINER